

- (21) Application No 6130185  
(22) Date of filing 6 Oct 1981  
(30) Priority data  
(31) 803283  
(32) 3 Nov 1980  
(33) Norway (NO)  
(43) Application published  
12 May 1982  
(51) INT CL<sup>3</sup>  
B63B 23/30  
(52) Domestic classification  
B7A 427 CA  
(56) Documents cited  
GB 489968  
GB 480923  
(58) Field of search  
B7A  
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**(54) Launching Ramp for Lifeboats, Life Rafts and the Like**

(57) A launching ramp (A) for lifeboats, life rafts and the like is hinged to a vessel (C) near the rail by means of a universal joint (D), and pontoons (J) are arranged on both sides of and a substantial distance from the centerline of the ramp to support buoyantly its free end. In this way the outer free end of the ramp (A)

will move freely in response to wave action. In the launching position, the ramp (A) extends on a downward incline from the ship to the surface of the sea, and it is also adapted to be rotated into an upraised position. The ramp (A) may be provided with a slide or rollerway down which a plurality of lifeboats or rafts slip, the boats or rafts being linked together by a cable (G) which runs onto a winch I in the innermost craft (E).

Fig. 3

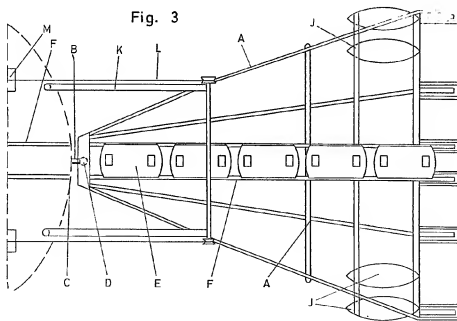
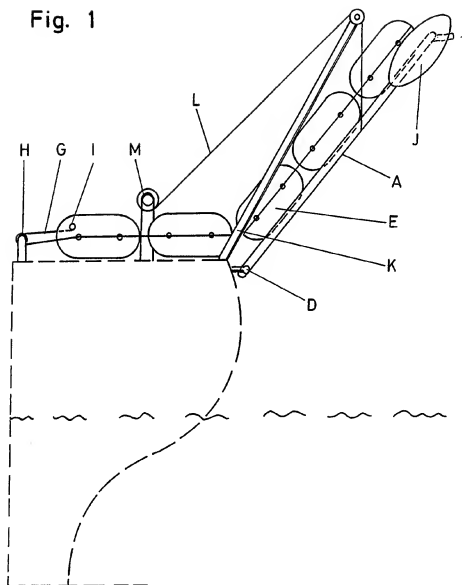
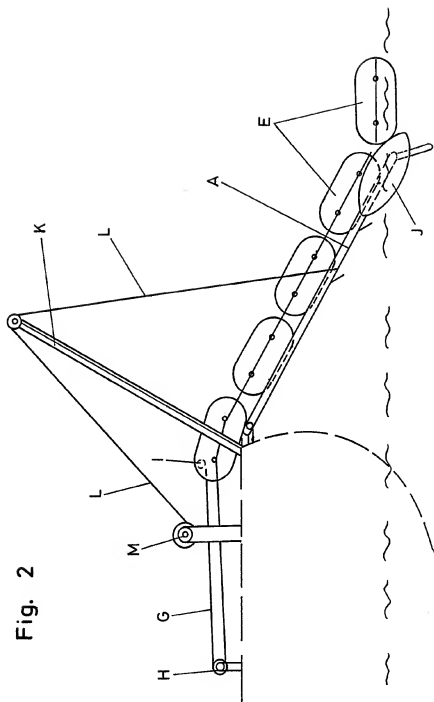
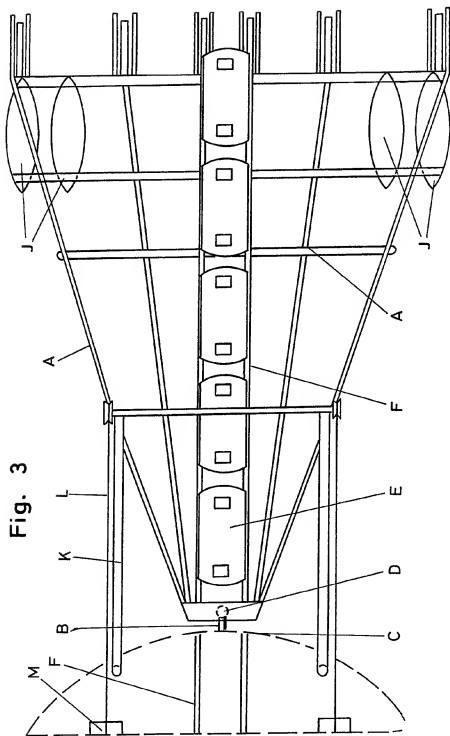


Fig. 1







## SPECIFICATION

## Launching Ramp for Lifeboats, Life Rafts and the Like

The present invention relates to an arrangement for a launching ramp for lifeboats, life rafts and the like, which is hinged to a vessel near its rail, which in the launching position extends on a downward incline from the ship to the surface of the sea and which is also adapted to be rotated into an upraised position, and which is provided with pontoons at the free end thereof.

A number of different launching devices for lifeboats, life rafts and the like have been both proposed and constructed in the past. Most of the known devices work very well in theory, and also work well in practice under favourable weather conditions. However, one must keep in mind that such launching devices, as a rule, are utilized in extremely bad weather and under other difficult conditions as well, perhaps with a fire or explosion having occurred on board, and moreover, that the time available to effect the operation is usually very short. In addition to the most conventional launching devices, such as davits and cranes for lowering lifeboats, launching ramps which can be let down from the ship are also known, from which lifeboats or life rafts are launched by sliding down the sloping ramp. From U.S. Patent 1,130,569, for example, a ramp is known which when in use slopes downwardly from the ship rail to the sea and which may be hoisted into an upraised position when the device is not in use. At the outer, free end thereof, the ramp is provided with pontoons intended to float on the water. The ramp is hinged to the vessel about an axis extending in the longitudinal direction of the vessel, but is rigidly connected to the vessel about an axis extending transversely of the ship's longitudinal direction. When lifeboats, life rafts or the like are being launched from such a ramp under conditions with high waves, the waves will wash crosswise over the launching ramp, and there is a risk that the lifeboats or the like may either be broken up or capsized. There is also a risk that the people on board the lifeboat or raft may be washed overboard.

The object of the present invention is to eliminate the above drawbacks of previously known launching ramps, and this is achieved in accordance with the invention in that the hinge connection between the ramp and the vessel consists of a universal joint, and that the pontoons are arranged on both sides of and a substantial distance from the centerline of the ramp.

In this manner, the outer, free end of the ramp, which is the point of transfer from the ramp to the sea surface, will be freely movable in relation to the waves. Since the pontoons are placed at a substantial distance from the ramp centerline, the free end of the ramp will obtain adequate lift on the waves so that high waves will not wash over it to any significant degree.

In accordance with a preferred embodiment of

the invention, the distance from the ramp centerline to the center of buoyancy of the pontoons is at least twice the width of the lifeboat or raft.

A further embodiment is characterized in that a plurality of lifeboat or rafts are arranged linked together on the ramp.

A practical embodiment of the invention is characterized in that a known per se slide or rollerway for the lifeboats or rafts is arranged on the ramp, and that the ramp, in the launching position, has such inclination relative to the horizontal plane that the boats or rafts slide along the launching path by their own weight.

The invention will be explained in greater detail with reference to the accompanying drawings, wherein

Figure 1 shows a launching ramp according to the invention arranged at the stern of a vessel, with the ramp in the upraised position.

Figure 2 shows the ramp with the lifeboats rotated down toward the sea surface during launching, the first lifeboat in the row already resting on the surface of the water.

Figure 3 shows the ramp as seen from above, with the lifeboats in a partially lowered position.

On the drawings, A designates the ramp which is rotatably connected at a point B to a vessel, for example, at the stern C. D designates a universal joint, e.g., a ball joint between the ramp and vessel, which enables the ramp to adjust freely to the movements of the sea.

E designates lifeboats which are positioned on a slipway F, which runs along the entire length of the ramp and extends a distance onto the vessel. All the lifeboats or life rafts are connected to each other by means of a cable G, which passes in a loop over a roll H on the vessel to a winch I on the innermost lifeboat. J designates the floats at the outer end of the ramp. With the aid of a rotatable gantry consisting of two derricks K with an intermediate stay at the outer end thereof, the ramp can be raised and lowered by means of cables L and winches M.

During launching of the lifeboats or rafts, the ramp A is swung down from the upraised position shown in Figure 1 into the launching position shown in Figure 2 by slackening the cable L with the winch M, causing the derricks K to pivot downwardly. The lifeboats or rafts E may be eased down along the slipway of the ramp by slackening the cable G with the aid of the winch I in the innermost boat.

Lowering of the ramp has been interrupted when the ramp is in the horizontal position, and in this position the lifeboats may be boarded. After the ramp has been lowered into the position shown in Figure 2, all of the lifeboats or rafts E can be launched. The entire launching operation can be carried out in very short time, since lowering the ramp and launching the lifeboats or rafts takes only a few minutes.

## Claims

1. A launching ramp for lifeboats, life rafts or

- the like, which is hinged to a vessel near the rail, which in the launching position extends on a downward incline from the ship to the surface of the sea and which is also adapted to be rotated into an upraised position, and which is provided with pontoons at the free end thereof,
- 5 *characterized* in that the hinge connection between the ramp (A) and the vessel (C) consists of a universal joint (D), and that the pontoons (J)
- 10 are arranged on both sides of and a substantial distance from the centerline of the ramp.
2. A launching ramp according to claim 1, *characterized* in that the distance from the ramp centerline to the center of buoyancy of the
- 15 pontoons (J) is at least twice the width of the lifeboat or raft (E).
3. A launching ramp according to claims 1 or 2,

- characterized* in that a plurality of lifeboats or rafts (E) are arranged in a linked state on the ramp.
- 20 4. A launching ramp according to one or more of the preceding claims, *characterized* in that there is provided on the ramp (A) a known per se slide or rollerway (F) for the lifeboats or rafts (E), and that the ramp (A), in the launching position,
- 25 has such inclination relative to the horizontal plane that the boats or rafts slide along said slipway by their own weight.
5. A launching ramp according to one or more of the preceding claims, *characterized* in that a
- 30 launching and hauling winch (I) is provided in the innermost lifeboat (E).
6. A launching ramp substantially as hereinbefore described with reference to the accompanying drawings.